

### **Amendments to the Claims**

1. (Currently Amended) A control system for a motor-generator, comprising a rotated-position detecting means for detecting a rotated position of a rotor included in a motor-generator which is connected to an engine in such a manner that the motor-generator can function as a three-phase magnet-type synchronous motor after starting of the engine, and a control unit for controlling a DC power produced by rectifying an AC power from a commercial power source based on an output from the rotated-position detecting means and supplying the DC power to each of three-phase coils included in said motor-generator, said motor-generator being capable of functioning as a brushless DC motor before starting of the engine,

wherein said rotated-position detecting means is arranged to detect an induced voltage in each of the three-phase coils included in the motor-generator and to compare said induced voltage with a voltage output from a conductor which serves as a neutral point commonly connected to said three-phase coils thereby to detect a rotated position of the rotor ~~based on said induced voltage~~.

### **Remarks**

The Office Action dated May 30, 2003, has been received and carefully noted. The amendments made herein and the following remarks are submitted as a full and complete response thereto.

Claim 1 has been amended and the specification has also been amended. Applicant submits that the amendments made herein are fully supported in the specification and the drawings as originally filed, and therefore no new matter has been added. Accordingly, claim 1 is pending in the present application and is respectfully submitted for consideration.

The specification has been amended to further clarify the subject matter illustrated in Figure 2 of the drawings. Applicant submits that no new matter has been added by the amendment.

Claim 1 was rejected under 35 USC §102(b) as being anticipated by Rajashekara et al. (U.S. Patent No. 5,751,069, hereinafter "Rajashekara"). Applicant respectfully submits that claim 1 recites subject matter that is neither disclosed nor suggested by the cited prior art.

Claim 1 recites a control system for a motor-generator having a rotated-position detecting means for detecting a rotated position of a rotor included in a motor-generator which is connected to an engine in such a manner that the motor-generator can function as a three-phase magnet-type synchronous motor after starting of the engine, and a control unit for controlling a DC power produced by rectifying an AC power from a

commercial power source based on an output from the rotated-position detecting means and supplying the DC power to each of three-phase coils included in the motor-generator. The motor-generator is capable of functioning as a brushless DC motor before starting of the engine. The rotated-position detecting means is arranged to detect an induced voltage in each of the three-phase coils included in the motor-generator and to compare the induced voltage with a voltage output from a conductor which serves as a neutral point commonly connected to the three-phase coils thereby to detect a rotated position of the rotor.

Accordingly, at least one of the essential features of the present invention is a rotated-position detecting means for detecting a rotated position of a rotor included in a motor-generator which is connected to an engine in such a manner that the motor-generator can function as a three-phase magnet-type synchronous motor after starting of the engine. As such, the present invention results in the advantage where the operation for assembling the motor-generator can be simplified.

It is respectfully submitted that the prior art fails to disclose or suggest the elements of the Applicants' invention as set forth in claim 1, and therefore fails to provide the advantages which are provided by the present application.

Rajashekara discloses a heat engine generator control system having a heat engine 11, and air/fuel control 13 and a generator 14. The heat engine 11 of Rajashekara has an output member operatively coupled to the rotor of a dynamoelectric machine. Furthermore, Rajashekara includes a generator control unit 50 that has three input thereto including a rotation speed signal on line 51 which is proportional to the

speed of generator 14 and engine output 12, a desired speed or reference speed for the rotation speed signal on line 52, and the bus voltage on line 53 Vb which is substantially equivalent to the battery 31 voltage on line 53. The reference speed is supplied to the generator control unit 50 by engine control unit as a function of the power requested. The rotation speed signal is supplied on line 51 and is developed by the cooperation of a sensor 54 and rotating member 55. The rotating member 55 rotates in proportion of the rotor of generator 14 and engine output member 12 of engine 11.

Applicant respectfully submits that each and every element recited within claim 1 is neither disclosed nor suggested by Rajashekara. In particular, Applicant submits that the control system for a motor-generator as recited in the present application is clearly distinct from that which is illustrated by the cited prior art. Specifically, it is submitted that the cited prior art fails to disclose or suggest at least the limitations of “a rotated-position detecting means for detecting a rotated position of a rotor...” and “wherein said rotated-position detecting means is arranged to detect an induced voltage in each of the three-phase coils included in the motor-generator and to compare said induced voltage with a voltage output from a conductor which serves as a neutral point commonly connected to said three-phase coils thereby to detect a rotated position of the rotor.”

Applicant notes that on page 2 of the Office Action, the Examiner appears to take the position that the rotating member 55 of Rajashekara is allegedly comparable or analogous to the rotated-position detecting means of the present invention. Applicant respectfully disagrees with the Examiner's position since Applicant submits that the

rotating member 55 of Rajashekara is significantly different from the rotated-position detecting means of the present invention because the rotating member 55 of Rajashekara fails to detect a rotated position of a rotor and does not detect an induced voltage in each of the three-phase coils included in the motor-generator and fails to compare said induced voltage with a voltage output from a conductor which serves as a neutral point commonly connected to said three-phase coils thereby to detect a rotated position of the rotor. Therefore, Applicant submits that the rotating member 55 of Rajashekara is neither comparable nor analogous to the rotated-position detecting means of the present invention.

Furthermore, Applicant submits that Rajashekara also fails to disclose or suggest the limitation of a control unit since the functional aspect of the control unit is based on an output from the rotated-position detecting means. In other words, since Rajashekara fails to disclose or suggest a rotated-position detecting means, it is submitted that Rajashekara also fails to disclose or suggest the control unit for controlling a DC power produced by rectifying an AC power because the functional aspect of the control unit is depending on the output from the rotated-position detecting means. Accordingly, Applicant submits that Rajashekara fails to disclose or suggest each and every element recited in claim 1 of the present application.

In view of the above, Applicant respectfully submits that claim 1 recites subject matter that is neither disclosed nor suggested in the cited prior art. Applicant also submits that the subject matter is more than sufficient to render the claims non-obvious

to a person of ordinary skill in the art, and therefore respectfully requests that claim 1 be found allowable and that this application be passed to issue.

If for any reason, the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact the Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper has not been timely filed, the Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 107348-00207**.

Respectfully submitted,



Sam Huang  
Registration No. 48,430

Customer No. 004372  
ARENT FOX KINTNER PLOTKIN & KAHN, PLLC  
1050 Connecticut Avenue, N.W., Suite 400  
Washington, D.C. 20036-5339  
Tel: (202) 857-6000  
Fax: (202) 638-4810

SH:mvb  
Doc No. 201455v1

Enclosure: Petition for Extension of Time (1 month)